That Article V. be approved, inserting the words: "or as soon after that date as the International Council may decide," in paragraph 29, after "January 1, 1901."

That Article VI. be approved, inserting at the beginning of paragraph 32, the words: "Unless the International Council decide otherwise";

Substituting in paragraph 34, p. 14, line 33, "instructed" for "authorised."

That Article VII., excepting paragraph 37, be approved—

Omitting paragraph 35 and the next paragraph in square brackets, and substituting therefor: "any body which establishes a regional bureau shall be termed a contracting body."

Omitting the words "which takes a complete share" in the first line of paragraph 40, and omitting the whole of the second sentence in this paragraph, and omitting the three appendices.

(14) It was further resolved to substitute for paragraph 37, Section VII., page 15, the following:—

"That it will be an instruction to the Provisional Committee to negotiate with the several contracting bodies with reference to the sale in their respective regions of copies other than those subscribed for by the contracting bodies."

Que les instructions soient données au comité provisoire pour négocier avec les différents corps contractants la question de la vente dans leurs pays respectifs des exemplaires souscrits par ces corps.

Aufgabe der Provisional Committee wird es sein, den verschiedenen contrahierenden Körperschaften (contracting bodies) bezüglich des Verkaufs von Exemplaren in ihren Ländern, ganz abgesehen von der gewahrleisteten Anzahl, bestimmt e Festsetzungen vorzuschlagen.

(15) It was resolved that the Provisional Committee contemplated in Resolution 12 (B) be constituted as follows:—Prof. Armstrong, Dr. Brunchorst, Dr. Graf, Dr. Milkau, Prof. Nasini, Prof. Poincaré, Prof. Weiss; power being given to the Royal Society, while retaining only a single vote, to nominate further members, and power being given to the Committee to appoint substitutes if any of those named were unable to serve, and also to co-opt two new members.

(16) On the motion of Sir Michael Foster and Prof. Rücker, it was resolved that the Royal Society be requested to appoint the Secretary to the Provisional Committee, and to meet provisionally such expenses as the Committee may incur.

(17) It was resolved that the *procès verbal* of the Conference be signed by the president and secretaries.

(18) The Royal Society was requested to undertake the editing, publication, and distrioution of a verbatim report of the proceedings of the Conference.

(19) On the motion of Prof. Schwalbe, a vote of thanks to Sir John Gorst for presiding over the Conference was passed by acclamation.

(20) On the motion of Sir Michael Foster, the thanks of the Conference were accorded to the Society of Antiquaries for the use of their rooms.

(Signed) JOHN E. GORST.
HENRY E. ARMSTRONG.
Dr. JOH. BERNOULLI.
G. CIAMICIAN.
I. DENIKER.

THE ROYAL SOCIETY CONVERSAZIONE.

THE exhibitions at the conversazione, which took place on the 20th inst., were numerous and interesting. There was a great wealth of photographs, including a large collection illustrating the results obtained during the last total eclipse. Among the other objects exhibited were the following:—

Prof. W. Ramsay, F.R.S., and Dr. M. W. Travers exhibited the inert atmospheric gases; their spectra, and some of the apparatus used in determining their physical properties.

The Meteorological Office exhibited North Atlantic weather charts, winter, 1898-99.

Prof. J. W. Judd, C.B., F.R.S., on behalf of the Coral-Reef Committee of the Royal Society, exhibited specimens from the reefs of Funafuti.

Mr. J. Mackenzie Davidson exhibited a stereoscopic fluoroscope. The stereoscopic fluoroscope is an instrument to enable an observer to see the shadows cast by the Röntgen rays on the fluorescent screen in *stereoscopic relief*.

Prof. W. E. Dalby exhibited a model to illustrate and experiment upon the balancing of four-cylindered engines.

Prof. Silvanus P. Thompson, F.R.S., showed experiments on the aberration called *Coma*. Coma is an aberration due to the several zones of the lens not having equal focal lengths, and hence, when the lens is transmitting an oblique pencil, the unequal refraction of the different parts gives rise to a singular unilateral distortion of the cones of rays traversing the various zones. In these experiments, the effects are analysed by covering the lens with a series of zones alternately opaque and transparent. Some singular effects can also be produced without the zone plate, by inserting in the oblique pencil, after traversing the lens, objects to cast shadows on a screen. In this way a straight wire can be arranged so that the shadow it casts is a totally-detached circle. Some diagrams of coma, and a string model illustrating their origin, were also shown.

Mr. W. Gowland exhibited Japanese books on botany, intended to show the general character of the work of Japanese botanists from 1759 to 1856.

Mr. W. Gowland, for the Silchester Excavation Committee, exhibited remains of a Roman silver refinery found at Silchester.

Mr. S. Evershed exhibited an electric supply meter (a frictionless motor meter).

Prof. H. S. Hele-Shaw, F.R.S., and Mr. A. Hay showed lines of induction in a magnetic field, represented by stream-line flow.

Prof. E. Ray Lankester, F.R.S., exhibited enlarged models of gnats (mosquitoes) and of human blood-corpuscles infected by the malaria-parasite; modelled by Miss Delta Emett. (1) Female *Culex pipiens*, Linn., the common brown gnat or mosquito; enlarged twenty-eight times linear. The insect is shown in the act of alighting. This gnat does not harbour the malaria-parasite. (2) Female *Anopheles maculipennis*, Hoffmansegg, the common spot-winged gnat or mosquito; enlarged twenty-eight times linear. (3) Models of human blood-corpuscles infested with the malaria-parasite (æstivo-autumnal or remittent fever) known as *Haemomenas praecox;* magnified seven thousand five hundred times linear. The blood-corpuscles are transparent, and show the parasites within. The upper row shows the multiplication of the parasite within the corpuscles by fission giving rise to "sporocytes," which creep into other non-infected blood-corpuscles and repeat the process, thus increasing the infection. The lower row shows the formation of a crescent-shaped "gametocyte" within the blood-corpuscle. Instead of breaking up, the parasite enlarges and becomes sausage-shaped. The "gametocytes" thus formed are destined to be swallowed by the gnat Anopheles, when they develop in the gnat's stomach—some into eggs and some into spermatozoa.

The Zoological Society of London showed two living female crowned lemurs (*Lemur coronatus*), each with a young one.

Prof. G. B. Howes, F.R.S., and Mr. H. H. Swinnerton exhibited reconstructional models, built up from microscopic sections, of the developing head skeleton of the New Zealand reptile, *Sphenodon punctatus*.

Sir John Evans, K.C.B., F.R.S., exhibited ancient cameos and gems, and palæolithic implements from Africa.

Prof. Wyndham Dunstan, F.R.S., exhibited the poisonous lotus of Egypt (*Lotus Arabicus*). (*a*) Living plant grown at Kew. (*b*) Dried plants from Nubia. (*c*) Specimens of the new glucoside, *Lotusine*, and its decomposition products.

Mr. Fred Enock exhibited an aquatic walking-stick insect, with eggs (*Ranatra linearis*).

The following demonstrations, with experiments and lantern illustrations, took place:—

Mr. Fred Enock, life-history of the *Cicindela campestris*—the common tiger beetle. This common Coleopteron goes through its metamorphoses in deep vertical burrows made in the sand by the curious larva, which "sits" at the top of the hole, patiently waiting for its prey to come to it, as it does not go in search of it. Three years are passed in its subterranean den, at the lower end of which it remains during the winter months in a semi-torpid state; activity is resumed at the approach of warm weather.

Prof. J. A. Fleming, D.Sc., F.R.S., demonstrations with an apparatus for the production of short electric waves, and the study of electro-optic phenomena. The apparatus exhibited consists of a radiator for the production of a beam of electric radiation, the wave-length being about eight inches. The radiator is contained in a zinc box, which prevents the diffusion of the radiation in all directions. The receiver consists of a metallic filings tube of the Branly type, associated with a relay and electric bell. The receiver is also contained in a zinc

shielding box. The impact of electric waves upon the receiver is indicated by the ringing of the bell. The radiator can be placed at different angular positions. With this apparatus are shown experiments illustrating the opacity of metallic screens, continuous or perforated to electric radiation; the transparency of insulating screens, and the transparency or opacity of various liquids. Water is found to be particularly opaque even in very thin layers. All damp objects are very impervious to this radiation, such as a wet duster, a moist brick, tobacco having more than the legal amount of water added to it, and the human body or hand. The refraction of electric waves is shown by the use of a paraffin wax prism, the concentration by paraffin lenses, and the polarised quality of the rays by their reflection or stoppage by parallel wire gratings. Also the production of secondary oscillations in linear conductors by holding rods of metal or tubes of liquid in the radiation. The wave length of the radiation is measured by producing interference as a result of splitting the beam into two portions and transmitting the two portions down two zinc tubes, the relative lengths of which can be adjusted.

Prof. A. C. Haddon, F.R.S., cinematograph photographs of native dances in Torres Straits.

THE RE-ORGANISATION OF THE EDUCATION DEPARTMENT.

IN introducing the Secondary Education Bill to the House of Lords on Tuesday last, the Duke of Devonshire made the following remarks on the re-organisation of the Education Department:—

"Your lordships may remember that on the Bill of last year some discussion took place upon the future organisation of the Education Department. I thought at the time, and I am still more strongly of opinion now, that that discussion was somewhat premature. It proceeded on the assumption that the organisation of the new office would continue on the same lines as those which had existed when the educational departments were separate and distinct, and that there would be in the new office two divisions, one of which would carry on the work of the old Education Office in connection with elementary education, and the other of which would carry on the work of the Science and Art Department. . . . We now propose to revert to a dual organisation of the office, but not entirely upon the lines of the late Education and Science and Art Departments. The principal officers of the department which we propose will be a principal permanent secretary, who will supervise generally the whole work of the department. It must be remembered, when special importance is attached to this or that minor subordinate appointment, that it will be the permanent secretary who will be responsible to the President of the Board in the administration of the whole department, and that it is impossible, and would be undesirable if it were possible, that the office should be divided into what I may call water-tight compartments, the head of each of which would be charged with special duties and no other, and that the idea should be entertained that the work of the office should be carried on in several departments, which should have no connection or relation with each other. We propose that under the principal permanent secretary there shall be two principal assistant secretaries, one mainly charged with duties in connection with elementary and the other with secondary education. We propose to abolish the name 'Science and Art Department.' The Science and Art Department will be merged in the secondary education branch of the office. As soon as it may be possible, we propose to transfer the greater part of the staff of the late Science and Art Department from South Kensington to Whitehall, except such part of it as may be necessary to leave at South Kensington for the administration of the museum and the colleges of science and art. In place of the third division that was contemplated, we now propose to give the principal assistant secretary of secondary education two additional assistant secretaries, one of whom will be chiefly charged with the supervision and control of literary instruction, and the other of technological study. This is not the organisation, I admit, to which I partly committed myself last year; but I trust that it may, in substance, meet the views, especially the later views, which have been expressed to me by high educational authorities. With the name we hope to get rid of many of the traditions which were supposed to attach to the old Science and Art Department—traditions which have, I believe, been regarded as opposed to the true interests of education by many of those who have been responsible for the management of the older endowed schools. The original idea of the Science and Art Department was, or at all events was supposed to be, that by means of lectures, classes, and examinations a knowledge of the principles of science and art, which would be valuable to the students themselves and to the nation at large, could be engrafted upon almost any kind of previous elementary or secondary training. It is quite true that this idea has been in recent years very largely modified, but I do not think that it is yet generally known how far the original traditions of the Science and Art Department have been already departed from. We hope and intend that the idea of the future education branch of the office will be to make science and art instruction a part of general education in addition to those classical and literary studies which have hitherto formed its main portion. In the schools and institutions directly assisted by the Board of Education the teaching of science and of art, with the addition, perhaps, of some commercial subjects, will probably remain the principal object. But, on the other hand, in those secondary schools, whether of older or more modern type, which desire to enter into connection with the board, there ought not to be, and there need not be, any interference with the older classical and literary studies so long as there continues to be a demand for them. At the same time, we hope that the scientific resources of the Board will be placed at their disposal if they desire, as many of them do desire, to develop the more modern sides of instruction and education. . . . It may be of interest to the House to know what are the principal appointments which have been made or are proposed to be made in the principal office of the new secondary education branch of the department. Sir George Kekewich, the late secretary of the Board of Education, has become the permanent principal secretary of the new Board, and it is he who will be responsible to the President of the Board and to the Government for the administration of the department as a whole. The principal assistant secretary for secondary education will be Sir William Abney, who has done more than any other man in extending the studies of the schools of science under the Science and Art Department. Under him the assistant secretary to deal with the literary side of instruction will be Mr. Bruce, an assistant commissioner to the Charity Commission under the Endowed Schools Act, who has been chiefly engaged and has obtained much experience in the administration of the Welsh Act. The assistant secretary for technological study has not yet been appointed."

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

CAMBRIDGE.—Prof. Sir Michael Foster has been nominated by the Council of the Senate as the representative of the University of Cambridge on the Council of the Jenner Institute of Preventive Medicine.

Mr. A. W. Hill, of King's College, and Mr. L. Lewton-Brain, of St. John's College, have been appointed University Demonstrators in Botany.

Mr. E. E. Walker, Trinity College, has been elected to the Harkness Scholarship in Geology and Palæontology.

Prof. Woodhead announces ten courses of lectures and demonstrations in Pathology and Bacteriology to be held during the ensuing Long Vacation.

Mr. Shelford Bidwell, F.R.S., was on June 19 admitted to the degree of Doctor of Science.

Mr. W. N. Shaw, F.R.S., has been elected a Senior Fellow of Emmanuel College. It is a condition attaching to his tenure that he shall give annually in the University not less than three lectures on the Physics of the Atmosphere or some kindred subject. Mr. C. T. R. Wilson, F.R.S., formerly Clerk Maxwell Student in experimental physics, has been elected to a fellowship at Sidney Sussex College.

The following have been awarded scholarships or exhibitions in Natural Science at the several colleges at the end of the academical year:—

Clare College: Bailey, Cartwright, Cassidy, Hughes.

Pembroke College: Lang, Anderson, Hall.

King's College: Kewley, French, Wilde, Mollison, McIntyre.

Christ's College: Fox, Moore, Wilson, Macnab, Muff, Cumberlidge, Sewell.